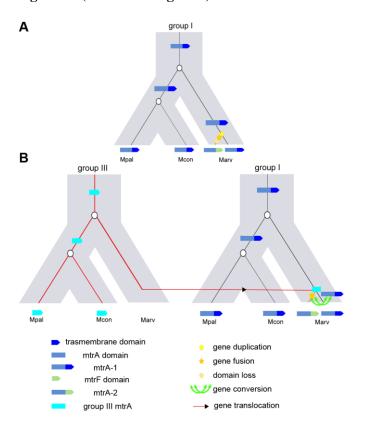
## Figure S6 (Related to Figure 5)



**Figure S6** (**Related to Figure 5**). Two different scenarios in regards to the additional copy of group I *mtrA in Methanocella arvoryzae*. (*A*) The additional copy of group I *mtrA* (*mtrA-2*) in *Marv*s generated by a lineage-specific duplication of group I *mtrA* (yellow star), gene fusion (orange star) and the loss of the C-terminal transmembrane domain (light yellow star).(*B*) *mtrA-2* in *Marv*is generated via the translocation of group III *mtrA* followed by the fusion with *mtrF* and gene conversion (indicated as green arrow). Each branch in grey represents a speciation event. The abbreviation of species names are as follows: *Marv*, *Methanocella arvoryzae*; *Mcon,Methanocella conradii*; *Mpal, Methanocella paludicola*.